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Land Mobile Radio and FCC Licensing

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Automated Frequency Coordination
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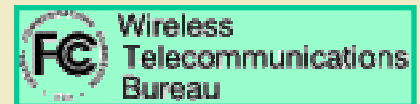
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2 Way Radio Licensing

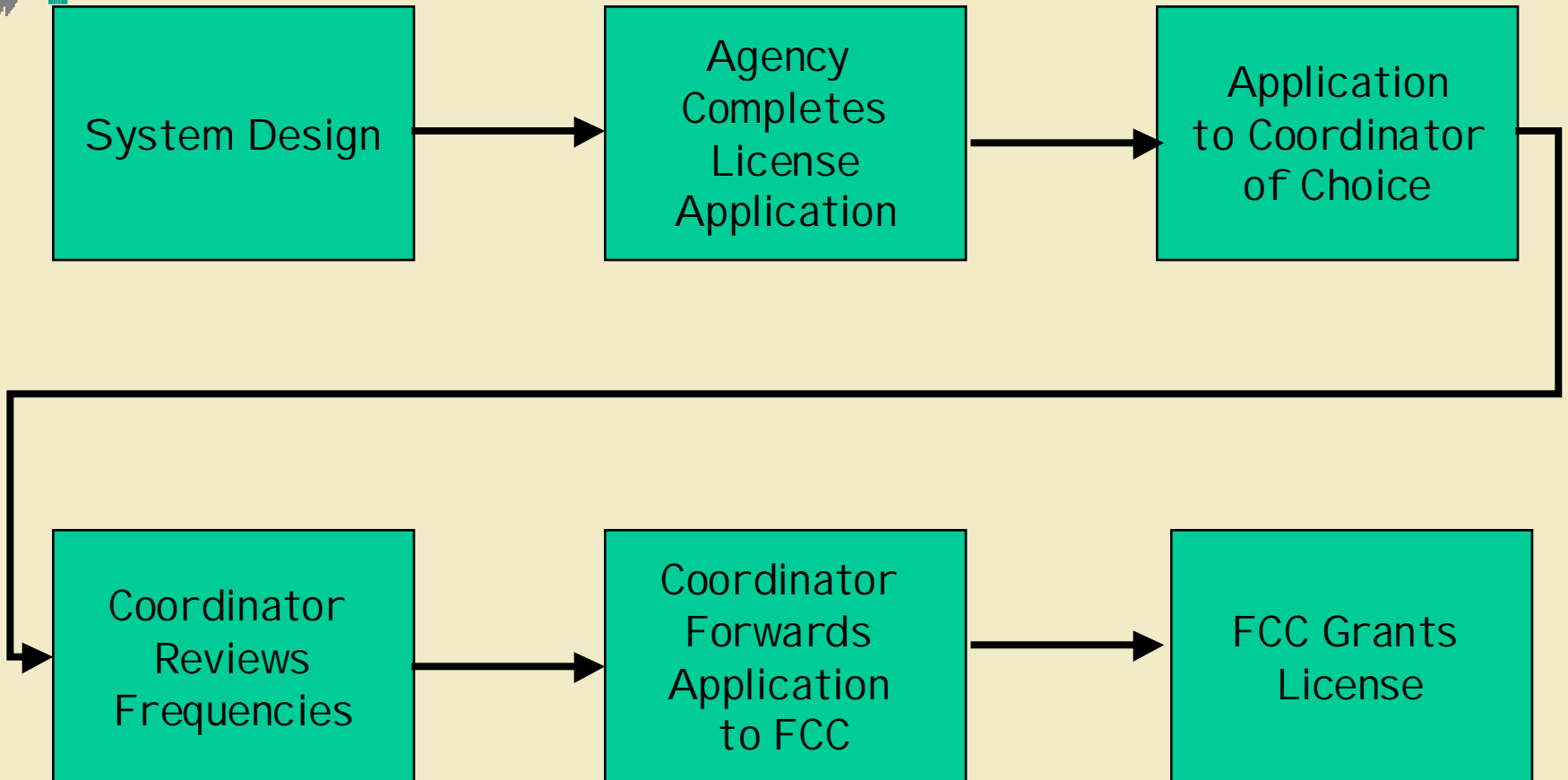
- **Government (All Federal including BIA)**
 - **Dept. of Commerce**
 - Executive Branch Agency
 - National Telecommunications Information Agency (NTIA)
 - IRAC (Interagency Radio Advisory Committee)
- **Non-Government (All non-federal)**
 - **Federal Communications Commission (FCC)**
 - Administrative Branch Agency
 - Certified Frequency Coordinators (non-profit associations)





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Licensing Steps





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Licensing Tribal Government Systems

- **FCC – ultimate authority**
 - **47CFR Part 90**
- **Part 90.20 eligibility statement for public safety**
 - **Classic - police, fire, EMS**
 - **Utility -roads, parks, other municipal maintenance**



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System Design

- **Agency Internal**
 - Self maintained agencies
- **External - Third Party**
 - Local radio shop
 - Equipment vendor
 - Consultant
- **License preparation**
 - Part of design (see above)
 - Separate function through licensing agents





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Frequency Coordination

- **Non-profit associations certified by the FCC for all public safety eligibles**
 - **APCO** Assoc. of Public Safety Communications Officials
 - **AASHTO** American Assoc. of State Highway Transportation Officials
 - **FCCA** Forestry Conservation Communications Assoc.
 - **IMSA** International Municipal Signal Assoc.
- **All are certified to process applications and forward to the FCC regardless of association affiliation.**



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Frequency Coordination

- **Verify a frequency supplied by applicant**
- **Provide a search for a new frequency**
- **Avoid interference**
 - **Pseudo exclusive geographic channel assignment**
- **Fees do apply for coordination**
 - **(But, there are no FCC fees for public safety)**



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2 Way Radio Technology

- **Conventional systems**
 - One channel per talk path
- **Trunking systems**
 - Dynamic channel assignment
 - Talk paths are “virtual”



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2 Way Radio Technology

- **Analog**
 - Long history
 - Established equipment and operational modes
- **Digital**
 - New technology (developing)
 - Secure
 - Advanced feature sets

2 Way Radio Technology

- **Voice**
 - Clear
 - Encrypted
- **Data – Mobile Data Terminals etc.**
 - NCIC (Vehicle registration checks etc.)
 - AVL (Automatic Vehicle Location)
 - Advanced feature sets





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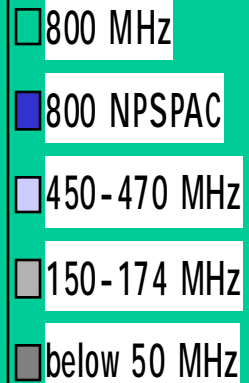
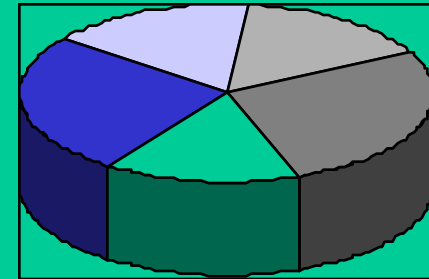
2 Way Radio Spectrum

75% of existing public safety systems are located in 150-174 MHz

Rural >

< Urban

- **Low Band VHF**
 - Below 50 MHz
- **High Band VHF**
 - 150 MHz to 174 MHz
- **UHF Band**
 - 450 MHz to 470 MHz
- **800 MHz Band**
- **700 MHz Band (new)**
 - TV channels 63, 64, 68, and 69



Allotted
Spectrum



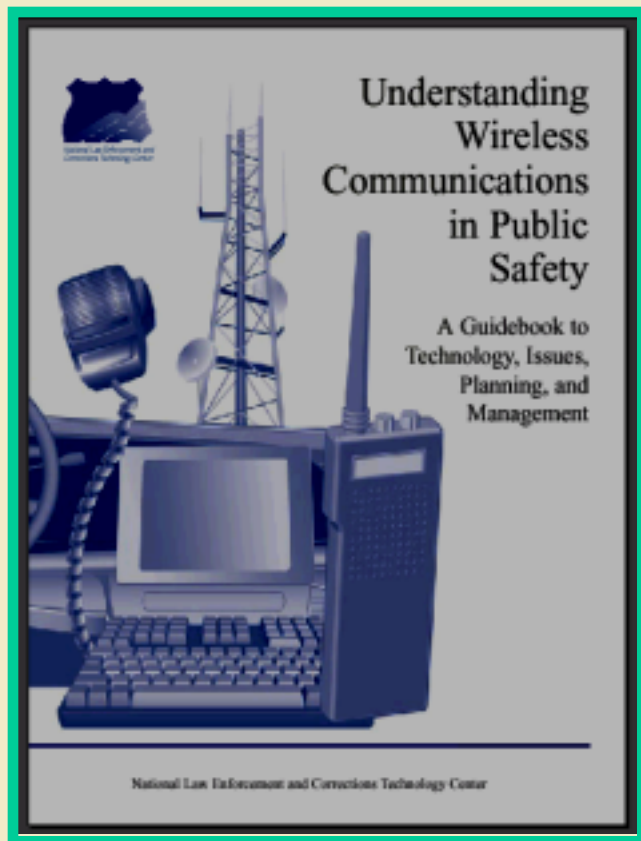
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System Planning Information



NLECTC - Rocky Mountain

National Law Enforcement and Corrections Technology Center
A Program of the National Institute of Justice



Tom Tolman
Communications Technology
Manager

Gene McGahey
Deputy Manager of
Communications Technology

1-800-416-8086

<http://www.nlectc.org/nlectcrm/communications.html>

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The
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APCO - AFC

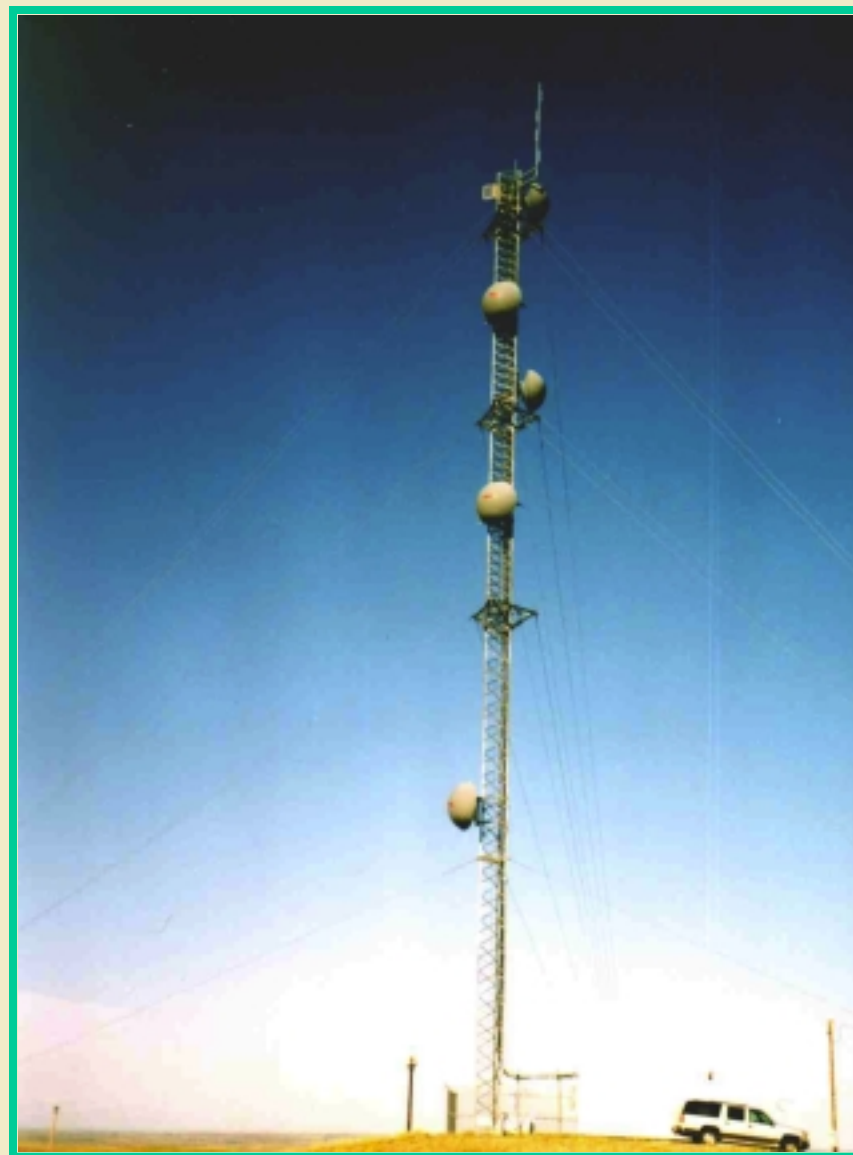
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